

REMARKS UNDER 37 CFR § 1.116

Formal Matters

Claims 15-37 are pending after entry of the amendments set forth herein.

Claims 15-37 were examined. Claims 15-37 were rejected.

Applicants respectfully request reconsideration of the application in view of the amendments and remarks made herein.

No new matter has been added.

The Office Action

In the Official Action of October 6, 2005, the Examiner introduced the “ScanAlyze” and “Dapple” references in new grounds of rejection of the claims.

Claims Rejected Under 35 U.S.C. Section 102 (ScanAlyze)

Claims 15, 18, 24-33 and 37 were rejected under 35 U.S.C. Section 102(b) as being anticipated by the “ScanAlyze” program as described in the ScanAlyze User Manual. Regarding claims 15 and 27, the Examiner indicated that ScanAlyze involves displaying an image of a molecular array, and superimposing distinct graphical objects representing at least two different characteristics of the data on the molecular array over positions where the data characteristics represented occur. The Examiner specifically referenced page 19 and page 25 of the ScanAlyze User Manual.

Applicants respectfully traverse this ground of rejection. Page 19 of the ScanAlyze User Manual described automatic flagging of spots, wherein a user is permitted to specify cutoff values for automatic flagging of spots. The spots that do not pass the specified cutoff values are highlighted with a bold outline. Applicants respectfully submit that highlighting with a bold outline of a spot is the same, regardless of which one or more cutoff values are not passed. To further clarify the present invention, claims 15 and 27 have been amended to clarify that the graphical objects representing different characteristics are distinct from one another. It is respectfully submitted that ScanAlyze clearly fails to

disclose or suggest graphical representation in this manner. Page 25 of the ScanAlyze Users Manual refers to quality control parameters and contains no disclosure of the superimposing distinct graphical objects over a displayed image of a molecular array.

In view of the above remarks and the amendments to the claims, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 15, 18, 24-33 and 37 under 35 U.S.C. Section 102(b) as being anticipated by the "ScanAlyze" program as described in the ScanAlyze User Manual, as being inappropriate.

Claims Rejected Under 35 U.S.C. Section 103(a) (ScanAlyze in view of Malamud et al.)

Claims 16-17 and 34-35 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over ScanAlyze, as described above, and in view of Malamud et al., U.S. Patent No. 6,437,800. The Examiner admitted that the ScanAlyze User Manual does not disclose that a tooltip is implemented to display alphanumeric information. However, the Examiner asserted that Malamud et al. teaches displaying a tooltip in response to a user positioning a pointer over a graphical object, wherein the tooltip displays alphanumeric information associated with the object, and that it would have been obvious to modify the user interface of ScanAlyze to include the tooltips of Malamud et al., so that in response to positioning a cursor over a feature, alphanumeric data associated with that feature is displayed in a tooltip.

Applicants respectfully disagree. Malamud et al. discloses the functionality of tooltips generally to display the name of an object pointed to, a preview of the contents of the object, or property information about the object. The ScanAlyze User Manual does not disclose or suggest superimposing or otherwise displaying results characterizing features calculated from data from within images of the features themselves. Rather, the automatic flagging referred to above, relates to alignment of a grid used for feature extraction processing downstream of the grid alignment process. Therefore, there would have been no suggestion to provide tooltips as claimed, since ScanAlyze does not highlight with regard to feature extraction results, but only for facilitating grid alignment. Further, Malamud et al. does nothing to overcome the deficiencies in the ScanAlyze User Manual in meeting the recitations of claims 15 and 27, since Malamud et al. is not even in the field of bioinformatics and therefore does not address processing of molecular arrays or displaying of information obtained thereby.

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 16-17 and 34-35 under 35 U.S.C. Section 103(a) as

being unpatentable over ScanAlyze, as described above, and in view of Malamud et al., U.S. Patent No. 6,437,800), as being inappropriate.

Claims Rejected Under 35 U.S.C. Section 103(a) (ScanAlyze in view of Dapple)

Claims 19-23 and 36 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over ScanAlyze User Manual, as described above, in view of “Dapple: Improved Techniques for Finding Spots on DNA Microarrays”, UW CSE Technical Report UWTR 2000-08-05 (hereafter, Dapple). The Examiner asserted that ScanAlyze involves displaying distinct graphical objects superimposed over features of a molecular array, and that the characteristics in which the distinct graphical objects are superimposed are selected by the user and are relative to the validity of the background, validity of the feature and the location of the feature. The Examiner admitted that the ScanAlyze User Manual does not disclose using distinct types of indications, distinct from the others in terms of shape or color to indicate such characteristics. However, the Examiner asserted that Dapple teaches marking spots using a plurality of distinct graphical objects to indicate valid features, invalid features and intermediate quality features, and that it would have been obvious to modify the ScanAlyze application by using different types of indications to indicate valid features, valid feature background, invalid features, invalid feature backgrounds, and positions of features in view of Dapple’s teaching.

Applicants respectfully disagree. It is respectfully submitted that Dapple neither superimposes graphical objects representing at least two different characteristics of the data on a image of a molecular array, nor superimposes objects over positions where the data characteristics represented occur. Rather, Dapple classifies spot qualities by indicating colored flags next to, not over the spots found. It is respectfully submitted that Dapple uses graphical objects to indicate only one characteristic, i.e., quality, and that the indicators of quality are not superimposed over positions wherein the data characteristics represented occur.

Further, it is respectfully submitted, as indicated above, that ScanAlyze does not superimpose distinct graphical objects, wherein the graphical objects representing different characteristics are distinct from one another, over positions where the data characteristics represented occur. For example, the Examiner asserted that ScanAlyze displays a distinct graphical object which may be used to indicated a statistically invalid feature background. Applicant disagrees, and finds no specific disclosure of this in the ScanAlyze User Manual. However, even if the Examiner’s assertion were correct, which Applicants disagree that it is, the graphical indication resulting would be a highlighting of the spot associated with

that background. This is clearly not an example of superimposing a distinct graphical object over a position where the data characteristics represented (in this case, background) occur. Dapple fails similarly in this regard, as a flag is positioned "near" a feature for which quality is being reported, not superimposed over that feature. Further, Dapple does not indicated more than one characteristic, as already noted.

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 19-23 and 36 under 35 U.S.C. Section 103(a) as being unpatentable over ScanAlyze User Manual, as described above, in view of Dapple, as being inappropriate.

Conclusion


Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078, order number 10010327-1.

Respectfully submitted,

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